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Request	Application Number	09/390,848	
for		September 14, 1999	
Continued Examination (RCE)	Filing Date	KOK, et al	
Transmittal	First Named Inventor	1645	1
Address to: Mail Stop RCE	Art Unit	N. MUNNEFIELD	1
Commissioner for Patents	Exeminer Name		)
P.O. Box 1450 Alexandria, VA 22313-1450	Attorney Docket Number	1-1995,150 US D1	1
This is a Request for Continued Examination (RCE) Request for Continued Examination (RCE) practice under 37 C	under 37 CFR 1.114 of the at FR 1.114 does not apply to any ut	My or plant application filed prior to June 6,	
Request for Continues Exercises (Inc.)	CEs (not to be cubmitted to the US	P(U) on page 2.	1
Submission required under 37 CFR 1.114 to emendments enclosed with the RCE will be entered in the experiment does not wish to have any previously tiled une emendment(s).	ntered emendment(s) entered, app	dicant must request non-erroy or such	
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B. Affidenti(s) Declaration(s)	M. W Other Ar	nendment filed by US Mell 07/27/2004	1.
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h. Other			
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE 29 AM 10 33

In re the application of:

KOK et al

Serial Number: 09/390,846

Group: 1645

Filed:

September 14, 1999 Examiner: Minnifield, N.

For:

COCCIDIOSIS POULTRY VACCINE

### PETITION FOR REFUND TO DEPOSIT ACCOUNT UNDER 37 C.F.R. \$1.26

Commissioner of Patents Alexandria, VA 22313

October 20, 2004

Sir:

The undersigned hereby petitions for a refund to Deposit Account 02-2334 in the amount of \$420.00 in connection with the above-identified application. Applicants respectfully submit the following remarks.

#### REMARKS

Applicants filed a Request for Continued Examination (RCE) by transmission of facsimile on July 27, 2004. On the RCE form Applicants checked the box "Other" with a typed note stating to enter "Amendment filed by US Mail 07/27/2004". USPTO charged Deposit Account \$420.00 on August 25, 2004 for a two month

extension, in connection with the filing of the Request for Continued Examination faxed.

Applicants' response to the outstanding Office Action mailed February 27, 2004, was respectfully submitted having been extended two months, along with the cited references by first class U.S. mail on July 27, 2004. Upon receipt the USPTO again charged Deposit Account 02-2334 an additional \$420.00 for a two month extension.

The result of the USPTO action was to charge deposit account 02-2334 a total of \$840 for a two month extension.

Applicants have attached the supporting documentation to show overcharge.

#### Conclusion

Applicants respectfully request a \$420 credit to deposit account 02-2334 because the USPTO double charged Applicants for a single two month extension.

Should the Examiner believe that a conference would be helpful in advancing the prosecution of this application, he is invited to telephone Applicants' Attorney at the number below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2334 for any

Attorney Docket No.: I-95.150 US D1

#### additional

Applicants respectfully request the Examiner Ct3 consider the above petition and hereby authorize the Commissioner to credit Deposit Account 02-2334 in the amount of four hundred and twenty dollars.

Respectfully submitted,

Mark W. Milstead Patent Counsel

Registration No.: 45,825

Akzo Nobel Pharma Patent Department 29160 Intervet Lane PO Box 318

Millsboro, DE 19966 Tel: 302-934-4395 Fax: 302-934-4305

Enclosure: Request for Continued Examination Filed July 27, 2004 (1 page)

Fax Cover Sheet dated July 27, 2004 (1 page)
Fax History Report dated July 27, 2004 (1 page)
Certificate of Mailing dated July 27, 2004 (1 page)
Amendment dated July 27, 2004 (17 pages)

Copy of postcard acknowledging receipt of items mailed July 27, 2004 (1)

DIVISION

PTO/SB/30 (09-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid QMB control number.

Request	Application Number	09/390,846	
for Continued Examination (RCE)	Filing Date	September 14, 1999	
Transmittal	First Named Inventor	KOK, et al	
Address to: Mail Stop RCE	Art Unit	1645	
Commissioner for Patents P.O. Box 1450	Examiner Name	N. MINNIFIELD	
Alexandria, VA 22313-1450	Attorney Docket Number	I-1995.150 US D1	
This is a Request for Continued Examination (RCE)	under 37 CFR 1.114 of the ab	ove-identified application.	

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

amendme	ssion required under 37 CFR 1.114 Note: If the RCE is proper, a cents enclosed with the RCE will be entered in the order in which they were does not wish to have any previously filed unentered amendment(s) enterent(s).	re filed unless applicant instructs otherwise. If			
a. Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.					
i. Consider the arguments in the Appeal Brief or Rely Brief previously filed on					
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Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a  a. period of months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)					
b. Other					
3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.					
3. Fees	The Director is hereby authorized to charge the following fees, or credit				
a. 🗸	Deposit Account No. 02-2334	tary overpayments, to			
ì.	RCE fee required under 37 CFR 1.17(e)				
ü.	Extension of time fee (37 CFR 1.136 and 1.17)				
ii.	Other				
b. 🦳 ʻ		nclosed			
. <u> </u>	Payment by credit card (Form PTO-2038 enclosed)				
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.					
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED					
Name (Print/Type)	Mark W. Milstead	Registration No. (Attorney/Agent) 45,825			
Signature	MAKK W. WASA	Date   July 27, 2004			
	CERTIFICATE OF MAILING OR TRANSM				
I hereby cartify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimilie transmitted to the U.S. Patent and Trademark Office on the date shown below.					
Name (Print/Type)					
Signature	(a) vaira Daelno	Date July 27, 2004			

This collection of information is required by 37 CFR 1.14. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Petent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. Do NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1,800-PTO-9199 and select option 2.

Telefax Transmittal Cover sheet



29160 Intervet Lane P.O. Box 318 Millsboro, DE 19966-0318 (302) 934-8051 COT 29 711 19: 33 July 27, 2004

2...pages including cover sheet.

PERSON TO: COMPANY/DEPT TO: FAX NUMBER:

MAIL STOP RCE

Commissioner for Patents

703-872-9306

Art Unit: 1645

PERSON FROM: COMPANY/DEPT FROM: FAX NUMBER:

Diane Payne

**Patent Department** 

302-934-4305

USSN: 09/390,846

Attorney Docket No.: I-1995.150 US D1

Please accept the documents which follow in the above-identified application:

Request for Continued Examination (PTO SB30) (1 page)

**Intervet** 

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Jul 27 2:30pm Sent 917038729306 1:02 2 OK

Result:

OK - black and white fax OK color - color fax

July 27, 2004

RE: KOK, et al

Attorney Docket No.: I-1995.150 US D1

USSN: 09/390,846

Receipt is acknowledged of the following papers in the above-identified application:

Amendment (17 pages) Cited Reference Schaap et al Journal Article (14 pages) Certificate of Mailing (1 page)

The Tolkiston

## Certificate of Mailing under 37 CFR 1.8 13 13 33

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

on <u>July 27, 2004</u> Date

Diane Payne
Typed or printed name of person signing Certificate

COPY

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Attorney Docket No.: I-1995.150 US D1 USSN: 09/390,846

Amendment (17 pages) Cited Reference Schaap et al Journal Article (14 pages) Self-Addressed Stamped Postcard

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: KOK et al.

Serial No.:

09/390,846

Group:

1645

Filed:

September 14, 1999

Examiner: N. Minnifield

For:

COCCIDIOSIS POULTRY VACCINE

#### AMENDMENT UNDER 37 C.F.R. \$1.116

Honorable Commissioner of Patents Alexandria, VA 22313

July 27, 2004

Sir:

In response to the outstanding Office Action mailed February 27, 2004, the period for response having been extended two months to July 27, 2004, Applicants respectfully submit the following amendment and remarks in connection with the above-identified application.

DIVISION

Attorney Docket NO. I/95150-US/D1

#### In the Claims

5-4 CCT 27 11 10 34

1. (Previously Presented) A protein expressed in vitro, comprising:

one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase (LDH), wherein said isolated protein is found intracellularly in Eimeria.

- 2. (Previously Presented) The protein according to claim 1, wherein the Eimeria species is Eimeria acervulina.
- 3. (Previously Presented) The protein according to claim 1, which comprises the amino acid sequence shown in SEQ ID NO:2, a biologically active variant, or an immunogenically active part sequence or variant.

#### 4-10. (Canceled)

11. (Previously Presented) A vaccine for the protection of poultry against Coccidiosis comprising:

an effective amount of an isolated protein comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase, wherein said isolated protein is found intracellularly in Eimeria.

#### 12. (Canceled)

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Attorney Docket NO. I/95150-US/D1

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13. (Previously Presented) A process for the preparation of a coccidiosis vaccine, comprising:

formulating a protein according to claim 1 into pharmaceutical preparation with immunizing activity.

#### 14. (Canceled)

(Withdrawn) A method for the protection of poultry against coccidiosis, comprising:

administering to the poultry a vaccine according to claim 11.

- 16. (Previously Presented) The protein according to claim 1, wherein said protein has a molecular weight of about 37 kD.
- (Previously Presented) An immunogenic fragment 17. Eimeria lactate dehydrogenase (LDH), wherein said LDH immunogenically reactive with antiserum raised against polypeptide of SEQ ID NO:2.
- 18. (Previously Presented) An immunogenic fragment of the protein according to claim 1, or a biologically active variant of said fragment.

- 19. (Previously Presented) The vaccine of claim 11, wherein the protein is present in pure form.
- 20. (Previously Presented) The vaccine of claim 11, further comprising a pharmaceutically acceptable carrier.
- 21. (Withdrawn) A method for the protection of coccidiosis, comprising:

administering to the poultry a vaccine according to claim 20.

- 22. (Canceled).
- 23. (Previously Presented) A vaccine for the protection of poultry against coccidiosis, comprising:

an effective amount of the protein according to claim 3.

- 24. (Previously Presented) The vaccine of claim 23, further comprising a pharmaceutically acceptable carrier.
- (Withdrawn) A method for the protection of poultry against coccidiosis, comprising:

administering to the poultry a vaccine according to claim 24.

or islock

Attorney Docket NO. I/95150-US/D1

26. (New) A vaccine for the protection of poultry quagainst coccidiosis, comprising:

an effective amount of the immunogenic fragment according to claim 17.

5 to 1515.

#### REMARKS

" " " 1 10: 34

Upon entering the above amendment claims 1-3, 11, 13, 15-21 and 23-25 are pending in the present application. Applicants have canceled claims 14 and 22 with the above amendment and added new claim 26. Claims 1, 11 and 17 are independent claims.

Applicants have not raised any issue of new matter.

Applicants concurrently have filed a Request for Continued Examination (RCE) and wish the above amendment entered into the record and considered.

#### Foreign Priority

The Examiner reports that foreign priority documents have not been received. This application is a Division of U.S. Application 08/676,882, July 3, 1996, now U.S. Patent 6,100,241; therefore, Applicants respectfully request the Examiner to review the parent application to see if the certified foreign priority document is present. Applicants need to know, if 08/676,882 has an original foreign priority document in it file wrapper before Applicants can act.

#### Issue Under 35 U.S.C. §112, First Paragraph

Claims 3, 18, 23 and 24 stand rejected under 35 U.S.C. §112, first paragraph, because the specification allegedly fails to

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Attorney Docket NO. I/95150-US/D1 provide an enabling disclosure for any fragment of the isolated protein. The Examiner has maintained the same rejection. Applicants traverse this assertion.

As stated in previous responses, the specification clearly enables an isolated 37kd protein from Eimeria acervulina consisting of the amino acid sequence set forth in SEQ ID NO.:2 and a vaccine containing the 37kd protein.

The Examiner asserts that the present disclosure fails to provide enablement of fragments and the one fragment present, GWIKQEEVDDIVQK, is not enabled for its use as a vaccine. Again Applicants direct the Examiner to page 8, line 31 through page 9, line 2 and page 14, last paragraph where this issue is addressed.

Applicants have previously presented decision from the Federal Circuit that supports Applicants' assertion for enablement. Applicants have considered the list of requirements for enablement set forth by the Examiner. Applicants assert that the parameters set forth are not the law. The requirement of indication each of fragment that will retain activity of the intact protein is wrong. It is unreasonable that each fragment must be identified and tested.

More importantly, Applicants are not inviting one to experiment. Applicants have set forth one fragment as admitted by the Examiner. Applicants have set forth disclosure that a skilled artisan would need to understand how to locate, isolate or synthesize and use immunogenic determinant by indicating this

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Attorney Docket NO. I/95150-US/D1

is done by Kyte-Doolittle plots, by Hopp-Woods plots and by surface-exposure plots of the Eimeria LDH. Proof of the effectivity of using such tools was provided pointing to the paper by Margalit et al (1987, J. of Immunol., vol. 138, p.2213-2229.

Applicants respectfully submit the publication by Schaap et al. (2004, Parasitology, vol. 128, p. 603-616). This journal article was published after the priority date of the application. Schaap et al. describes the cloning and the sequences of LDH's from the Eimeria species acervulina, tenella and maxima. identity between the amino acid (aa) sequences is described as "rather low" and as "extensively diverged" being between 66 and 80% aa identity. A multiple alignment of the aa sequences is presented in figure 2 (p. 606). The aa sequence of E. tenella LDH was used to model its 3D structure, which was compared to that of Plasmodium falciparum (Malaria) LDH. Remarkably, the E. tenella and P. falciparum LDH proteins share only 47% aa identity but have an almost identical 3 dimensional structure (see figure 3, page 609). The article asserts on page |609 (bottom of left column - through top of right column): although the primary structure (the aa sequence) is "substantially different", their 3D structures are "very similar". Schaap et al. recite in the middle of that same page: "In summary . . . only shows 47% identity . . . conserved active site features . . . predicted to be a molecule with very similar properties."

2. 11:16.

Therefore, Applicants respectfully submit the following as 100.001 29 40 10 34 facts:

-the patent application shows effective vaccination with E. acervulina LDH

-the publication by Schaap et al. show as sequences of LDH protein of two more Eimeria species: tenella and maxima.

-these other two LDH proteins are "substantially different" in primary as sequence: 66-80% identity.

-the 3D structure of the tenella LDH was predicted by computer modeling, and was compared to that of P. falciparum LDH

-the two 3D structures are "very similar"

-the primary as sequence of the LDH proteins of E. tenella and P. falciparum are only 47% identical.

From these submitted facts, Applicants: respectfully submit the following logical conclusions:

- 1. When two LDH proteins being so dissimilar as E. tenella and P. falciparum (47% identity) are found to have a very conserved 3D structure, then the three Eimeria LDH's which are much more related at the primary as sequence level (66-80% identity) may be expected to be even more conserved in 3D structure.
- 2. It is common knowledge that a proteins 3D structure is important for immune-efficacy and the recognition of that protein by the immune system of a host-organism, consequently proteins

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Attorney Docket NO. I/95150-US/D1

with a highly similar 3D structure will also be similar immunogenic properties

3. Consequently, as the E. acervulina LDH proved to be effective as a vaccine, therefore, the E. tenella and E. maxima LDH proteins, arguably having a 3D structure very similar to that of E. acervulina LDH, will also be effective in vaccines.

Applicants respectfully submit that the biological variants of E. acervulina LDH, such as the E. tenella and E. maxima LDH proteins, will be equally effective vaccines as the E. acervulina LDH.

Therefore, the present claims are enabled and would not lead to an undue burden of experimentation. The Examiner herself has presented alleged prior art that describe techniques known already in 1975 to determine size and specificity of Eimeria LDH enzymes in crude samples. Therefore, Applicants respectfully request withdrawal of the 35 U.S. §112, first paragraph rejection.

#### Issue Under 35 U.S.C. §102(b)

Claims 1-3, 11, 16-20 and 23-24 stand rejected under 35 U.S.C. §102(b) as being anticipated by Shirley (Parasitology, 71:369-376, 1975). Applicants assert that patentable distinction exists between the cited prior art and the present invention.



#### Distinction Between the Present Invention and Shirley

As presented in a previous response, Shirley allegedly discloses lactate dehydrogenase enzyme from E. acervulina. Shirley discloses a biochemical characterization of crude samples from Eimeria sporozoites, merozoites and oocysts. The characterization applied is starch-gel electrophoresis and substrate incubation.

The Examiner maintains an inherency argument that the isolated protein of the present invention is present within the mixture disclosed. Furthermore, the Examiner maintains that the vaccine claim is an intended use of the enzyme.

Shirley fails to disclose or suggest a protein expressed in vitro, comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase (LDH), wherein said isolated protein is found intracellularly in Eimeria; a vaccine for the protection of poultry against Coccidiosis comprising an effective amount of an isolated protein comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase, wherein said isolated protein is found intracellularly in Eimeria; and an immunogenic fragment of Eimeria lactate dehydrogenase (LDH), wherein said LDH is immunogenically reactive with antiserum raised against the polypeptide of SEQ ID NO:2.

Shirley, at best, discloses a native intact Eimeria LDH protein. Shirley never mentions using these proteins as

vaccines.

Applicants still completely disagree with Examiner's statement that the recitation of "vaccine" is an intended use. The vaccine claims stand alone. A vaccine claims can be clearly patentable, if is novel, even if the protein itself is anticipated. Shirley fails to discuss a vaccine; thus, it is completely impossible for Shirley to anticipate a "vaccine" claim.

Shirley fails to disclose each element of the present invention as set forth in the claims.

Applicants respectfully request withdrawal of the 35 U.S.C. §102(b).

#### Issue Under 35 U.S.C. §102(b)

Claims 1-3, 11, 16-18 and 23 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kucera (Folia Parasitologica 36(4):295-299). Applicants assert that patentable distinction exists between the cited prior art and the present invention.

#### Distinction Between the Present Invention and Kucera

As presented in an earlier response, Kucera allegedly discloses lactate dehydrogenase enzyme from E. acervulina. Kucera discloses methods for performing techniques of Shirley (see above) with a certain type of electrophoresis equipment.

Homogenized Eimeria oocysts are used.

or not 29 M 10: 34 argument that

The Examiner maintains an inherency isolated protein of the present invention is present within the mixture disclosed. Furthermore, the Examiner maintains that the vaccine claim is an intended use of the enzyme.

Kucera fails to disclose or suggest a protein expressed in vitro, comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase (LDH), wherein said isolated protein is found intracellularly in Eimeria; a vaccine for the protection of poultry against Coccidiosis comprising an effective amount of an isolated protein comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase, wherein said isolated protein is found intracellularly in Eimeria; and an immunogenic fragment Eimeria lactate dehydrogenase (LDH), wherein said LDH immunogenically reactive with antiserum raised against polypeptide of SEQ ID NO:2.

Kucera, at best, discloses a native intact Eimeria LDH protein. Kucera never mentions using these proteins as vaccines.

Applicants completely disagree with Examiner's Again, statement that the recitation of "vaccine" is an intended use. Kucera fails to discuss a vaccine; thus, it is completely impossible for Kucera to anticipate a "vaccine" claim.

Kucera fails to disclose each element of the present invention as set forth in the claims.

DIVISIO.:

Attorney Docket NO. I/95150-US/D1

Applicants respectfully request withdrawal of the 35 U.S.C. \$102(b).

### Issue Under 35 U.S.C. §102(b)

Claims 1-3, 16-18 and 23 stand rejected under 35 U.S.C. §102(b) as being anticipated by Nakamura et al (Journal of Veterinary Medical Science, 53(6):1101-1103, 1991. Applicants assert that patentable distinction exists between the cited prior art and the present invention.

## Distinction Between the Present Invention and Nakamura et al.

As previously presented, Nakamura et al. allegedly discloses lactate dehydrogenase enzyme from E. acervulina. Nakamura et al. discloses Eimeria enzyme starch-gel electrophoresis, and uses enzymes samples from sporulated oocysts.

The Examiner maintains an inherency argument that the isolated protein of the present invention is present within the mixture disclosed. Furthermore, the Examiner maintains that the vaccine claim is an intended use of the enzyme.

Nakamura et al. fails to disclose or suggest a protein expressed in vitro, comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase (LDH), wherein said isolated protein is found intracellularly in Eimeria; a vaccine for the protection of poultry against

Coccidiosis comprising an effective amount of an isolated protein comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase, wherein said isolated protein is found intracellularly in Eimeria; and an immunogenic fragment of Eimeria lactate dehydrogenase (LDH), wherein said LDH is immunogenically reactive with antiserum raised against the polypeptide of SEQ ID NO:2.

Nakamura et al., at best, discloses a native intact Eimeria LDH protein. Nakamura et al. never mentions using these proteins as vaccines.

Again, Applicants completely disagree with Examiner's statement that the recitation of "vaccine" is an intended use. Nakamura et al. fails to discuss vaccine; thus, it is completely impossible for Nakamura et al. to anticipate a "vaccine" claim.

Nakamura et al. fails to disclose each element of the present invention as set forth in the claims.

Applicants respectfully request withdrawal of the 35 U.S.C. \$102(b).

#### Conclusion

All the stated grounds of the rejections have been properly traversed, accommodated or rendered moot. Applicants respectfully submit that the present application is in condition for allowance.

If the Examiner believes for any reason that personal

communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at 3(302) 934-4395, in Millsboro, Delaware.

Pursuant to 37 C.F.R. §§1.17 and 1.136(a), Applicants respectfully petitions for a two month extension of time for filing a response in connection with the present application and the Commissioner is hereby authorized to charge the required fee of \$420 to Deposit Account No. 02-2334.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies, to charge payment or credit any overpayment to Deposit Account No. 02-2334 for any additional

fees required under 37 C.F.R. \$1.16 or under 13:73 C.F.R. \$1.17;

particularly extension of time fees.

Respectfully submitted,

Attorney for Applicants Registration No. 45,825

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MWM

Enclosure: Schaap et al. Journal Article

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